1. In this evidence, I consider the relationship between political betting and political opinion polls, and highlight peer-reviewed research I have undertaken into this. I also reference some other published work of mine on opinion polling and political forecasting more generally. Research I have undertaken into the impact of the dissemination of information via social media is also highlighted.

2. The recorded history of election betting markets can be traced as far back as 1868 for US presidential elections (Rhode and Strumpf, 2013) and 1503 for papal conclaves. Between 1868 and 2012, no clear favourite for the White House had lost the presidential election other than in 1948, when longshot Harry Truman defeated his Republican rival, Thomas Dewey. 2016 can be added to that list, following the defeat of strong favourite Hillary Clinton in the Electoral College.

3. The record of the betting markets in predicting the outcome of papal conclaves is somewhat more chequered and is considered in Vaughan Williams and Paton (2015) in which I examine, with my co-author Professor David Paton, the success of papal betting markets historically.

4. The potential of the betting markets and prediction markets (markets created specifically to provide forecasts) to assimilate collective knowledge and wisdom has increased in recent years as the volume of money wagered and number of market participants has soared. Betting exchanges alone now see tens of millions of pounds trading on a single election.

5. An argument made for the value of betting markets in predicting the probable outcome of elections is that the collective wisdom of many people is greater than that of the few. We might also expect that those who know more, and are better able to process the available information, would on average tend to bet more.

6. The lower the transaction costs (the betting public have not paid tax on their bets in the UK since 2001, and margins have fallen since the advent of betting exchanges) and the lower the costs of accessing and processing information (through the development of the Internet and search engines), the more efficient we might expect betting markets to become in translating information into forecasts. Modern betting markets might be expected for these reasons to provide better forecasts than ever.

7. There is plenty of anecdotal evidence about the accuracy of political betting markets, especially compared to the polls. The 1985 by-election in Brecon and Radnor is a
classic example. On Election Day, July 4th, an opinion poll undertaken by the Mori polling organisation was published which gave Labour a commanding lead of 18 percent over the Liberal Alliance candidate. Ladbrokes simultaneously made the Liberal the 4/7 favourite. The Liberal won.

8. Forward 20 years to a BBC World Service live radio debate in 2005, in the run-up to the UK general election, when forecasts were swapped between the Mori representative and myself on the likely outcome of the election. I predicted a Labour majority of about 60, as I had done a few days earlier in the Economist magazine (Economist, April 14th, 2005) and on BBC Radio 4 Today (April, 18th, 2005), based on the betting at the time. The Mori representative predicted a Labour majority of over 100 based on their polling. The actual majority was 66.

9. More recent anecdotal evidence comes from the 2012 US presidential election. Barack Obama was the heavy favourite to win, while the average of the pollsters had the popular vote within 0.7%, and two leading polling organisations, Gallup and Rasmussen, had Mitt Romney ahead in final polls. Obama won by 3.9%.

10. During the later stages of the 2014 Scottish referendum campaign, the polling average had it relatively close (especially compared with the actual result), with more than one poll calling it for independence (one by 7%). The betting odds were always very strongly in favour of Scotland staying in the UK. The result echoed the 1995 Quebec separation referendum in Canada. There the final polling showed ‘Yes to separation’ with a six point lead. In the event, ‘No to separation’ won by one point. This late swing to the ‘status quo’ is credited by some with the confidence in the betting markets about a ‘NO’ outcome in Scotland.

11. In the 2015 general election in Israel, final polls showed Netanyahu’s Likud party trailing the main opposition party by 4% (Channel 2, Channel 10, Jerusalem Post), by 3% (Channel 1) and by 2% (Teleseker/Walla). Meanwhile, Israel’s Channel 2 television news on Election Day featured the odds on the online prediction market site, Predictwise. This gave Netanyahu an 80% chance of winning. The next day, Netanyahu declared that he had won “against the odds.” He actually won against the polls.

12. Polling averages during the 2015 UK general election campaign often showed Conservatives and Labour very close in terms of vote share. Meanwhile, the betting odds always had Conservative most seats as short odds-on. On the Monday before polling day, for example, the polling average had it essentially tied in terms of vote share, while Conservatives to win most seats was trading on the markets as short as 1/6.
13. For the 2015 Irish same-sex marriage referendum, the spread betting markets were offering a mid-point of 60% for YES to same-sex marriage, and 40% for NO. The average of the final opinion polls had YES on 71% and NO on 29%. The final result was 62%-38% for YES, much closer to the projection from the markets.

14. If this anecdotal evidence is correct, it is natural to ask why the betting markets outperform the opinion polls in terms of forecast accuracy. One obvious reason is that there is an asymmetry. People who bet in significant sums on an election outcome will usually have access to the polling evidence, while opinion polls do not take account of information contained in the betting odds (though the opinions expressed might). Sophisticated political bettors also take into account the past experience of how good different pollsters are, what tends to happen to those who are undecided when they actually vote, differential turnout of voters, what might drive the agenda between the dates of the polling surveys and election day itself, and so on. All of this can in principle be captured in the markets.

15. Pollsters, except perhaps with their final polls, tend to claim that they are not producing a forecast, but a snapshot of opinion. In contrast, the betting markets are generating odds about the final result. Moreover, the polls are used by those trading the markets to improve their forecasts, so they are a valuable input. But they are only one input. Those betting in the markets have access to much other information as well including, for example, informed political analysis, statistical modelling, focus groups and on-the-ground information including local canvass returns.

16. To test the reliability of the anecdotal evidence pointing to the superior forecasting performance of the betting markets over the polls, I collected vast data sets of every matched contract placed on two leading betting exchanges and from a dedicated prediction market for US elections since 2000. This was collected over 900 days before the 2008 election alone, and to indicate the size, a single data set was made up of 411,858 observations from one exchange alone for that year. Data was derived notably from presidential elections at national and state level, Senate elections, House elections and elections for Governor and Mayor. Democrat and Republican selection primaries were also included. Information was collected on the polling company, the length of time over which the poll was conducted, and the type of poll.

17. My co-author, Dr. James Reade, and I compared the betting over the entire period with the opinion polls published over that period, and also with expert opinion and a statistical model.

18. In a paper, titled ‘Forecasting Elections’ (Vaughan Williams and Reade, 2016b), published in the ‘Journal of Forecasting’ – see also Vaughan Williams and Reade, 2017, 2015), we specifically assessed opinion polls, prediction and betting markets, expert opinion and statistical modelling over this vast data set of elections in order to determine which performed better in terms of forecasting outcomes. We
considered accuracy, bias and precision over different time horizons before an
election.

19. A very simple measure of accuracy is the percentage of correct forecasts, i.e. how
often a forecast correctly predicts the election outcome.

20. A related but distinctly different concept to accuracy is unbiasedness. An unbiased
vote share forecast is, on average, equal to the true vote share outcome. An
unbiased probability forecast is also, on average, equal to the true probability that
the candidate wins the election. Forecasts that are accurate can also be biased,
provided the bias is in the correct direction. If polls are consistently upward biased
for candidates that eventually win, then despite being biased they will be very
accurate in predicting the outcome, whereas polls that are consistently downward
biased for candidates that eventually win will be very inaccurate as well as biased.

21. We also identified the precision of the forecasts, which relates to the spread of the
forecasts.

22. We considered accuracy, bias and precision over different time horizons before an
election. We found that the betting/prediction markets provided the most accurate
and precise forecasts and were similar in terms of bias to opinion polls. We found
that betting/prediction market forecasts also tended to improve as the elections
approached, while we found evidence of opinion polls tending to perform worse.

23. In Brown, Reade and Vaughan Williams (2017), we examine the precise impact of the
release of information from a leading opinion polling company on the political
betting markets. To do this, we use an extensive data set of over 25 million contracts
that records (anonymised) individual trader IDs for the buyers and sellers of the
contracts and align this to the exact time of release of this information. We find that
polling releases by this prominent opinion pollster quickly influences trading volumes
and market prices, but that experienced and more aggressive liquidity-taking traders
bide their time before entering the market after such news events. We find that the
market prices are not at their most informative in the immediate aftermath of a poll
release.

24. We also conducted research into the impact of breaking news on the markets,
notably via social media and live blogging. In Vaughan Williams and Paton (2015) we
use an extensive data set of contracts matched on a leading betting exchange
specifically regarding the outcome of the 2013 papal election. We found that
genuine information released on Twitter was not reflected in the betting markets,
and was only very partially incorporated when published later on the live blog of a
major British newspaper. One possible explanation is that the information was not
believed as it related to a closed-door conclave ( Vaughan Williams, 2015a, considers
closed door forecasting in another context). However, this finding was consistent in some respects with evidence in Vaughan Williams and Reade (2016a) about the limited impact on a leading betting exchange of major breaking news in a UK general election when released on Twitter, at least until the news was validated by traditional media.

25. In summary, the overwhelming consensus of evidence prior to the 2015 UK General Election pointed to the success of political betting markets in predicting the outcome of elections. In contrast, the 2015 UK General Election, the 2016 EU referendum in the UK, the 2016 US presidential election and the 2017 UK election, all produced results that were a shock to the great majority of pollsters as well as to the betting markets. In each case, the longshot outcome (Conservative overall majority, Brexit, Trump, No overall majority) prevailed.

26. There are various theories as to why the polls and markets broke down in these recent big votes. One theory is based on the simple laws of probability. An 80% favourite can be expected to lose one time in five, if the odds are correct. In the long run, according to this explanation, things should balance out.

27. A second theory to explain recent surprise results is that something fundamental has changed in the way that information contained in political betting markets is perceived and processed. One interpretation is that the widespread success of the betting markets in forecasting election outcomes, and the publicity that was given to this, turned them into an accepted measure of the state of a race, creating a perception which was difficult to shift in response to new information. To this extent, the market prices to some extent led opinion rather than simply reflecting it. From this perspective, the prices in the markets became somewhat sticky.

28. A third theory is that conventional patterns of voting broke down in 2015 and subsequently, primarily due to unprecedented differential voter turnout patterns across key demographics, which were not correctly modelled in most of the polling and which were not picked up by those trading the betting markets.

29. There are other theories, which may be linked to the above, including the impact of social media, and manipulation of this, on voter perceptions and voting patterns.

30. I explore how well the pollsters, ‘expert opinion’, modellers, prediction and betting markets performed in the 2017 UK general election in Vaughan Williams (2017a) – “Report card: how well did UK election forecasters perform this time?” and explore the polling failure in the 2015 UK general election in Vaughan Williams (2015b) – “Why the polls got it so wrong in the British election”, and some implications in a follow-up article (Vaughan Williams, 2015c).

References


31 October 2017